

Health Care Access Among Individuals Involved in Same-Sex Relationships

Julia E. Heck, PhD, MPH, Randall L. Sell, ScD, and Sherri Sheinfeld Gorin, PhD

The importance of health care access as a component of overall health status is illustrated by its inclusion as 1 of the 10 leading health indicators in *Healthy People 2010*.¹ Access to care refers not only to geographic availability of quality health services but to financial, social, cultural, and structural issues associated with care.² Research has clearly established that disenfranchised groups, including people of color and those of low socioeconomic status, have difficulty gaining access to health care.^{3,4} Because of the stigma attached to their sexual orientation, it might be expected that gay, lesbian, and bisexual (GLB) Americans would experience limitations in terms of their access to medical care.

Research on the GLB population has been limited by a lack of population-based data involving probability samples. Because information on sexual orientation is not collected in most national surveys, data on health care access among GLB individuals have often been limited to local surveys or health center-based convenience samples. Although this selection bias must be taken into account, the findings of these studies suggest reduced health care access in the GLB population relative to the overall US population. Notably, GLB individuals may use preventive care services at a reduced rate. Some studies suggest that lesbians may undergo mammography and Papanicolaou testing less frequently than other women.^{5–10} Also, there is evidence that gay men may use health services less frequently than their heterosexual counterparts.^{11,12}

According to the Institute of Medicine, health insurance is the most important factor in US residents' receipt of timely and appropriate health care.¹³ Studies focusing on health insurance coverage among men with HIV who have sex with men have revealed that these men have coverage rates lower than those of the general population.^{14–17} However, because of the association between HIV and poverty and seropositive individuals'

Objectives. We used data from the National Health Interview Survey to compare health care access among individuals involved in same-sex versus opposite-sex relationships.

Methods. We conducted descriptive and logistic regression analyses from pooled data on 614 individuals in same-sex relationships and 93 418 individuals in opposite-sex relationships.

Results. Women in same-sex relationships (adjusted odds ratio [OR]=0.60; 95% confidence interval [CI]=0.39, 0.92) were significantly less likely than women in opposite-sex relationships to have health insurance coverage, to have seen a medical provider in the previous 12 months (OR=0.66; 95% CI=0.46, 0.95), and to have a usual source of health care (OR=0.50; 95% CI=0.35, 0.71); they were more likely to have unmet medical needs as a result of cost issues (OR=1.85; 95% CI=1.16, 2.96). In contrast, health care access among men in same-sex relationships was equivalent to or greater than that among men in opposite-sex relationships.

Conclusions. In this study involving a nationwide probability sample, we found some important differences in access to health care between individuals in same-sex and opposite-sex relationships, particularly women. (*Am J Public Health*. 2006;96:1111–1118. doi:10.2105/AJPH.2005.062661)

potentially greater access to Medicaid and other low-cost health programs, it is difficult to generalize these rates to all gay men.^{17–20}

Results of regional and national surveys focusing on lesbian populations have varied in terms of the percentages of women reporting health insurance coverage, with rates ranging from 72% to 87%; health insurance coverage is usually shown to be less prevalent among lesbians and bisexual women than among heterosexual women.^{5,10,15,21–23} Reduced use of health care services is a concern among lesbians and bisexual women, given reports that rates of cigarette smoking and alcohol use are higher among GLB individuals than among other adult groups.^{5,24,25} These behavioral differences, in addition to lower screening rates, have led to some researchers postulating that lesbians may be at higher risk of certain cancers.^{26,27}

Health care access among the GLB population has been an understudied area of public health. To our knowledge, no population-based national surveys have used random probability samples to measure health care access in this population. We examined health insurance coverage and other indicators of

health care access among individuals involved in a same-sex relationship (SSR), hypothesizing that such individuals would be less likely than those living with an opposite-sex spouse or partner to have insurance coverage, to use health care services, and to have a regular source of care.

METHODS

The 1997 through 2003 versions of the National Health Interview Survey (NHIS) collected information on health behaviors and health care access among the civilian, noninstitutionalized population of the United States. The methodology followed a multistage probability design and included oversampling of minority individuals. With appropriate sample weighting, the data are representative of the entire US adult population. The response rate for the NHIS during the study period was more than 90% of eligible households.²⁸ In the case of several independent variables, including education level, health insurance status, and household member's relationship to index respondent, we excluded from analyses instances in which responses in the "refused/"

don't know/not ascertained" category represented less than 1% of the overall sample.

Sample Selection and Definition of Same-Sex Relationships

We included in our analyses adults 18 to 64 years of age who were living with a spouse or partner during the data collection period assessed here (1997–2003). Respondents' self-reported sexual orientation was not ascertained. In the NHIS sampling design, an adult household reference person is selected within each survey household, and other household members' gender and their relationship with the reference person are recorded. The procedure followed by interviewers is to ask the name of each person in the household and then ask of the household reference person, "What is [each person's name]'s relationship to you?" Among others, possible responses are "spouse (husband/wife)" and "unmarried partner."

In this manner, individuals living with same-sex or opposite-sex spouses or partners were identified for the period under study. Although it is not known whether these relationships were monogamous, there were no respondents for whom more than one partner or spouse was identified. If one partner in a relationship was not identified as the household reference person (e.g., cases in which extended families with multiple adults lived together in a household), it was not possible to determine whether a couple was living in the household. As such, some same-sex and opposite-sex partnerships may have been excluded.

In every household, a sample adult was randomly selected to complete an in-depth interview. If either the reference person or his or her spouse or partner was selected as the sample adult, this individual was included in the analysis. The sample did not include more than one person from any given household. The final sample sizes for the present analyses were 614 individuals involved in an SSR and 93 418 individuals involved in an opposite-sex relationship (OSR). (We use the terms "GLB" and "heterosexual" to describe the population as a whole and "SSR" and "OSR" to refer to the participants in the NHIS sample.)

Indicators of Interest

Our choices of explanatory variables were guided by the model formulated by Andersen,

which suggests that patterns of health care use are influenced by predisposing, enabling, and need-related factors, as well as environmental conditions.²⁹ The predisposing variables on which we focused included age, race, educational attainment, and a behavior-related factor, smoking status. Enabling factors included family income, employment status, and health insurance status. Income level, education level, and employment status are all strong predictors of health care access in the United States.³⁰ The single geographic factor assessed was region of residence (Northeast, Midwest, South, or West). Need-based factors included self-rated health status and presence of children in the household.

Outcomes

We used 4 outcomes in determining health care access: whether respondents had health insurance coverage, whether they had a regular source of health care, whether they had seen a provider in the previous 12 months, and whether they had unmet medical needs as a result of cost issues. Respondents were categorized as having a usual source of health care if they identified a doctor's office, clinic, or hospital outpatient department, and not a hospital emergency room, as their usual source of care. A provider visit within the preceding 12 months was defined as an interpersonal exchange with a health professional such as a nurse practitioner, physician assistant, general doctor, or medical specialist.

Whether or not respondents had unmet medical needs as a result of cost issues was determined via questions asking respondents whether they had forgone needed medical care in the previous 12 months owing to such issues. Health insurance indicators included insurance status at the time of the interview, whether the policyholder was the respondent or someone else in the household, and whether the respondent's insurance policy allowed him or her to select any provider or whether the provider had to be selected from a group or list.

Statistical Analysis

The initial data analysis focused on calculating descriptive statistics for all of the variables assessed. Continuous or categorical outcome measures were used to test each variable's

effects on health care access via one-way (repeated measures) analyses of variance or χ^2 analyses. We used multiple logistic regression to determine the independent effects of socioeconomic and demographic characteristics on outcomes. If bivariate analyses showed that descriptive variables differed significantly across groups, they were included in the multiple logistic regression as predictors. All regressions were stratified according to gender. All *P* values were 2-tailed. Analyses were conducted with SUDAAN to incorporate weights reflecting the sampling strategy, adjustment for nonresponse, and the potential effect of cluster sampling in the estimation of standard errors.³¹

RESULTS

The demographic characteristics of the SSR and OSR populations are shown in Table 1. SSR respondents as a whole were younger and more highly educated than OSR respondents, and the SSR population included a significantly larger proportion of men than the OSR population. SSR women were more likely than OSR women to be employed and to live in the northeastern and western United States. Slightly more than half of OSR men and women reported having children living in their household, whereas one fourth of SSR women and few SSR men (5%) reported living with children. SSR women were more likely to be of White non-Hispanic race/ethnicity.

Primary Outcome Measures

SSR women reported less use of health care services and more barriers to health care use than OSR women. After control for explanatory variables (Table 2), SSR women were significantly less likely than OSR women to have health insurance coverage (odds ratio [OR]=0.60; 95% confidence interval [CI]=0.39, 0.92). SSR women were at 85% increased odds (95% CI=1.16, 2.96) of having unmet medical needs as a result of cost issues (Table 3). Regression results showed that SSR women were significantly less likely than OSR women to report having seen a medical provider in the previous 12 months (OR=0.66; 95% CI=0.46, 0.95). Also, after control for explanatory variables, SSR women

TABLE 1—Demographic Characteristics of Respondents in Same-Sex and Opposite-Sex Relationships: National Health Interview Survey, 1997–2003

	Men, % (SE)		Women, % (SE)	
	Same Sex (n = 316)	Opposite Sex (n = 42 856)	Same Sex (n = 298)	Opposite Sex (n = 50 562)
Gender composition of group	55.2 (2.2)**	49.1 (0.2)	44.8 (2.2)**	50.9 (0.2)
Age, y				
18–24	6.4 (1.4)***	4.7 (0.1)	10.0 (2.2)*	7.4 (0.2)
25–34	30.0 (2.7)	22.2 (0.3)	22.4 (2.7)	23.9 (0.2)
35–44	40.8 (2.9)	30.3 (0.2)	32.9 (2.7)	29.8 (0.2)
45–54	15.3 (2.1)	25.6 (0.3)	26.7 (3.0)	24.0 (0.2)
55–64	7.5 (1.4)	17.1 (0.2)	8.0 (1.7)	15.0 (0.2)
Race/ethnicity				
Non-Hispanic White	80.1 (2.5)	76.1 (0.4)	82.1 (2.4)*	77.9 (7.0)
Non-Hispanic Black	7.3 (1.7)	8.5 (0.2)	8.9 (1.5)	7.2 (0.2)
Hispanic	8.9 (1.6)	11.2 (0.3)	5.6 (1.3)	10.6 (0.2)
Other non-Hispanic	3.7 (1.3)	4.2 (0.2)	3.4 (1.5)	4.3 (0.1)
Educational attainment				
Less than high school	5.2 (1.4)***	14.0 (0.3)	8.1 (1.7)***	12.6 (0.2)
High school or equivalent	17.4 (2.3)	29.1 (0.3)	25.0 (2.6)	30.5 (0.3)
Some college/associate degree	30.5 (2.6)	27.9 (0.2)	25.2 (2.8)	30.2 (0.3)
Bachelor's degree or higher	46.9 (3.1)	29.1 (0.4)	41.8 (3.3)	26.7 (0.4)
Smoking status				
Current smoker	32.7 (3.0)	25.5 (0.3)	29.6 (2.6)	20.8 (0.2)
Former smoker	20.7 (2.4)	26.0 (0.2)	26.1 (2.6)	19.1 (0.2)
Never smoked	46.5 (3.0)	48.5 (0.3)	44.3 (3.0)	60.1 (0.3)
Yearly income, \$				
≥ 20 000	92.2 (1.6)	90.3 (0.2)	90.4 (1.9)	89.7 (0.2)
< 20 000	7.8 (1.6)	9.7 (0.2)	9.6 (1.9)	10.3 (0.2)
Employed in week before survey				
Yes	83.8 (1.6)	87.6 (0.2)	84.1 (3.0)***	67.7 (0.3)
No	17.5 (3.1)	12.2 (0.3)	16.4 (3.0)	32.4 (0.3)
Region of residence				
Northeast	20.0 (2.8)	18.2 (0.3)	21.9 (2.9)**	19.0 (0.3)
Midwest	21.3 (2.4)	26.2 (0.4)	25.7 (2.5)	26.0 (0.4)
South	36.4 (3.2)	36.3 (0.5)	26.5 (2.9)	35.7 (0.5)
West	22.3 (2.3)	19.3 (0.3)	25.9 (2.6)	19.3 (0.4)
Children living in household	5.0 (1.3)***	56.6 (0.3)	23.6 (2.5)***	55.6 (0.3)
Self-reported health status				
Excellent	44.8 (3.0)	36.8 (0.3)	34.1 (3.0)	34.7 (0.3)
Very good	29.9 (2.9)	33.8 (0.3)	34.0 (2.8)	34.2 (0.2)
Good	19.0 (2.3)	21.3 (0.2)	22.4 (2.5)	22.9 (0.2)
Fair/poor	6.4 (1.4)	8.0 (0.2)	9.6 (1.7)	8.2 (0.1)

Note. Percentages are weighted. Statistical tests compared within-gender differences and reflect weighted χ^2 differences across groups. Post hoc tests were not conducted.

* $P < .05$; ** $P < .01$; *** $P < .001$.

significance), and they were two thirds more likely (95% CI=1.19, 2.23) to have seen a physician in the previous 12 months. SSR men and OSR men were equally likely to report unmet medical needs as a result of cost issues.

Additional Insurance Analyses

In comparison with OSR men and women, significantly higher proportions of SSR men ($P=.0001$) and women ($P<.0001$) with insurance coverage were named policyholders (Table 4). After control for explanatory variables, SSR men (OR=2.08; 95% CI=1.39, 3.13) and women (OR=5.26; 95% CI=3.40, 8.15) were significantly more likely than OSR men and women to have health insurance in their own name (data not shown). The spouses or partners of OSR women and men were significantly more likely than the spouses or partners of SSR women and men to have health insurance coverage.

The percentages of respondents with an insurance plan that allowed them to choose any provider they desired were compared with the percentages of respondents who had to choose from a list or group of providers as an indicator of the ability of SSR women and men to select a provider who might be sensitive to their needs. One third of SSR men and women with private insurance coverage reported that they could choose any provider they wished under their primary insurance plan, and this result did not differ across groups in either bivariate or multiple logistic regression analyses (data not shown).

DISCUSSION

To our knowledge, this is one of the first epidemiological studies involving a probability sample to measure health care access in the GLB population. A landmark 1999 report published by the Institute of Medicine noted that lesbians who seek health care may face access barriers.²⁷ The present findings support that conclusion. Our analyses showed reduced health care access among SSR women relative to other women, even after control for other demographic and health risk characteristics that might have explained such disparities.

Our findings highlight the relevance of sexual orientation to health care access in the

had half the odds of having a usual source of health care (OR=0.50; 95% CI=0.35, 0.71).

There was a statistical trend toward SSR men having less health insurance coverage

than OSR men (OR=0.72; 95% CI=0.50, 1.06). However, SSR men were 40% more likely than OSR men to have a usual source of health care (a result that was of borderline

TABLE 2—Multiple Logistic Regression Analysis of Health Insurance Coverage and Frequency of Visits to Health Professionals: National Health Interview Survey, 1997–2003

	Health Insurance Coverage, OR (95% CI)		Visit to Health Professional in Past 12 Months, OR (95% CI)	
	Men	Women	Men	Women
Involved in same-sex relationship	0.72 (0.50, 1.06)	0.60 (0.39, 0.92)*	1.63 (1.19, 2.23)**	0.66 (0.46, 0.95)*
Predisposing factors				
Age group, y				
18–24	0.18 (0.15, 0.21)***	0.29 (0.25, 0.33)***	0.53 (0.46, 0.61)***	1.56 (1.31, 1.84)***
25–34	0.27 (0.24, 0.31)	0.38 (0.33, 0.43)	0.50 (0.45, 0.56)	1.06 (0.93, 1.22)
35–44	0.42 (0.37, 0.48)	0.53 (0.47, 0.60)	0.57 (0.51, 0.63)	0.78 (0.68, 0.90)
45–54	0.63 (0.55, 0.72)	0.72 (0.64, 0.81)	0.77 (0.69, 0.85)	0.94 (0.83, 1.06)
55–64	1.00	1.00	1.00	1.00
Race/ethnicity				
Non-Hispanic White	1.00	1.00	1.00	1.00
Hispanic	0.42 (0.38, 0.46)***	0.38 (0.35, 0.42)***	0.74 (0.69, 0.80)***	0.71 (0.65, 0.78)***
Non-Hispanic Black	0.88 (0.78, 0.99)	0.83 (0.74, 0.92)	0.90 (0.82, 0.99)	0.90 (0.80, 1.02)
Other non-Hispanic	0.54 (0.45, 0.66)	0.54 (0.46, 0.64)	0.73 (0.64, 0.83)	0.46 (0.40, 0.54)
Educational attainment				
Less than high school	0.19 (0.17, 0.22)***	0.19 (0.17, 0.22)***	0.44 (0.40, 0.48)***	0.34 (0.30, 0.39)***
High school or equivalent	0.35 (0.31, 0.39)	0.33 (0.29, 0.37)	0.63 (0.58, 0.68)	0.48 (0.43, 0.53)
Some college/associate degree	0.51 (0.45, 0.57)	0.45 (0.40, 0.50)	0.81 (0.76, 0.88)	0.69 (0.62, 0.77)
Bachelor's degree or higher	1.00	1.00	1.00	1.00
Smoking status				
Never smoked	1.00	1.00	1.00	1.00
Current smoker	0.59 (0.54, 0.64)***	0.64 (0.59, 0.69)***	0.84 (0.79, 0.90)***	0.82 (0.76, 0.89)***
Former smoker	1.08 (0.98, 1.19)	1.11 (1.00, 1.22)	1.27 (1.19, 1.36)	1.44 (1.29, 1.62)
Enabling factors				
Yearly income, \$				
<20 000	0.29 (0.27, 0.32)***	1.00 (0.89, 1.12)***	0.76 (0.69, 0.83)***	0.77 (0.70, 0.85)***
≥20 000	1.00	1.00	1.00	1.00
Unemployed in week before survey	0.73 (0.65, 0.81)***	0.63 (0.58, 0.67)***	1.30 (1.18, 1.42)***	1.04 (0.96, 1.12)
Health insurance status				
Private coverage	...	...	1.00	1.00
Public coverage	...	...	1.15 (0.98, 1.35)***	1.18 (1.00, 1.40)***
Uninsured	...	...	0.38 (0.35, 0.41)	0.28 (0.26, 0.31)
Region of residence				
Northeast	1.00	1.00	1.00	1.00
Midwest	1.13 (1.00, 1.27)***	0.29 (0.27, 0.32)***	0.85 (0.78, 0.92)***	0.85 (0.76, 0.96)***
South	0.69 (0.62, 0.76)	0.60 (0.54, 0.67)	0.85 (0.78, 0.92)	0.82 (0.73, 0.92)
West	0.79 (0.70, 0.90)	0.77 (0.69, 0.87)	0.76 (0.70, 0.83)	0.71 (0.62, 0.80)
Need-based factors				
Children living in household	1.14 (1.05, 1.23)***	1.06 (0.98, 1.15)	0.98 (0.93, 1.04)	1.02 (0.94, 1.12)
Self-reported health status				
Excellent	1.00	1.00	1.00	1.00
Very good	0.98 (0.90, 1.07)***	0.86 (0.79, 0.93)***	1.23 (1.16, 1.31)***	1.26 (1.16, 1.37)***
Good	0.82 (0.74, 0.90)	0.77 (0.71, 0.84)	1.55 (1.44, 1.68)	1.49 (1.35, 1.64)
Fair/poor	1.10 (0.96, 1.25)	0.92 (0.81, 1.04)	3.39 (2.95, 3.89)	3.18 (2.71, 3.74)

Note. OR = odds ratio; CI = confidence interval.

* $P < .05$; ** $P < .01$; *** $P < .001$.

United States. SSR women fared poorly compared with OSR women across a range of indicators, strongly suggesting that there are important disparities in receipt of health services between these 2 groups. SSR women were less likely than OSR women to visit a doctor or have a regular source of health care, and they were more likely to report experiencing unmet medical needs as a result of cost issues. Although unknown confounders may have produced these results, they are consistent with the findings of other studies.^{21–23} Possible reasons for disparities between SSR and OSR populations include historical factors (e.g., treatment of homosexuality as a mental illness³²) and dissatisfaction with health care services stemming from discrimination on the part of providers or the health care system (for a review, see the Institute of Medicine report mentioned earlier²⁷).

We found notable similarities and differences between male participants. SSR and OSR men were similar in their odds of having unmet medical needs owing to cost issues. SSR men were two thirds more likely than OSR men to have seen a health care provider in the previous year, and there was a trend for these men to be more likely to have a usual source of health care. It is not known why, even after results had been controlled for self-reported health status, SSR men would make greater use of health services. It may be that the HIV epidemic has revolutionized health care among some gay men, making them more likely to have a regular provider, to be open about their sexual orientation, or to seek preventive care for concerns that could be exacerbated by HIV.

It is unclear why there were such disparate findings between SSR women and SSR men. Men in general are known to see health care providers less frequently than women,³³ setting “the bar” lower and perhaps making it easier for SSR men to achieve parity with OSR men. The HIV epidemic may have altered the way gay men interact with the health care system, but equivalent changes might not be in evidence among lesbians, in part because of their lower risk for HIV. In addition, a previous study showed that lesbians may have more difficulty than gay men in communicating with health care providers; this finding was attributed to the fact

TABLE 3—Multiple Logistic Regression Analysis of Frequencies of Unmet Medical Needs Resulting From Cost Issues and Presence of a Usual Source of Health Care: National Health Interview Survey, 1997–2003

	Unmet Medical Needs, OR (95% CI)		Usual Source of Care, OR (95% CI)	
	Men	Women	Men	Women
Involved in same-sex relationship	1.14 (0.65, 1.99)	1.85 (1.16, 2.96)**	1.40 (0.99, 1.98)	0.50 (0.35, 0.71)***
Predisposing factors				
Age group, y				
18–24	2.11 (1.62, 2.76)***	1.71 (1.36, 2.15)***	0.21 (0.18, 0.25)***	0.33 (0.28, 0.39)***
25–34	2.01 (1.64, 2.46)	1.78 (1.48, 2.15)	0.29 (0.26, 0.32)	0.41 (0.35, 0.47)
35–44	1.77 (1.44, 2.19)	1.53 (1.27, 1.83)	0.44 (0.39, 0.50)	0.50 (0.43, 0.58)
45–54	1.52 (1.26, 1.84)	1.35 (1.14, 1.60)	0.63 (0.56, 0.71)	0.67 (0.58, 0.77)
55–64	1.00	1.00	1.00	1.00
Race/ethnicity				
Non-Hispanic White	1.00	1.00	1.00	1.00
Hispanic	0.56 (0.48, 0.66)***	0.58 (0.49, 0.68)***	0.67 (0.62, 0.73)***	0.64 (0.58, 0.71)***
Non-Hispanic Black	0.81 (0.68, 0.96)	0.83 (0.69, 1.00)	1.05 (0.94, 1.18)	1.11 (0.97, 1.27)
Other non-Hispanic	0.96 (0.74, 1.24)	0.68 (0.51, 0.91)	0.93 (0.78, 1.09)	0.57 (0.48, 0.68)
Educational attainment				
Less than high school	1.08 (0.87, 1.35)**	1.23 (1.02, 1.49)***	0.71 (0.64, 0.79)***	0.81 (0.71, 0.94)***
High school or equivalent	1.31 (1.07, 1.60)	1.31 (1.12, 1.54)	0.83 (0.76, 0.91)	0.95 (0.85, 1.06)
Some college/associate degree	1.31 (1.09, 1.58)	1.63 (1.40, 1.90)	0.99 (0.91, 1.09)	1.10 (0.99, 1.22)
Bachelor's degree or higher	1.00	1.00	1.00	1.00
Smoking status				
Never smoked	1.00	1.00	1.00	1.00
Current smoker	1.54 (1.36, 1.75)***	1.61 (1.42, 1.82)***	0.68 (0.63, 0.73)***	0.73 (0.67, 0.80)***
Former smoker	1.07 (0.92, 1.26)	1.26 (1.09, 1.45)	0.96 (0.89, 1.04)	1.02 (0.92, 1.13)
Enabling factors				
Income, \$				
<20 000	1.35 (1.17, 1.55)***	1.26 (1.11, 1.43)***	0.77 (0.70, 0.85)***	0.72 (0.65, 0.80)***
≥20 000	1.00	1.00	1.00	1.00
Unemployed in week before survey	1.29 (1.10, 1.52)**	1.13 (1.02, 1.26)*	1.07 (0.95, 1.20)	0.86 (0.79, 0.94)***
Health insurance status				
Private coverage	1.00	1.00	1.00	1.00
Public coverage	2.22 (1.77, 2.78)***	1.92 (1.59, 2.32)***	0.99 (0.82, 1.18)***	1.32 (1.08, 1.61)***
Uninsured	8.98 (7.84, 10.28)	9.77 (8.64, 11.06)	0.18 (0.16, 0.19)	0.16 (0.14, 0.18)
Region of residence				
Northeast	1.00	1.00	1.00	1.00
Midwest	0.83 (0.68, 1.02)	0.91 (0.77, 1.07)**	0.68 (0.60, 0.76)***	0.88 (0.78, 1.00)***
South	1.11 (0.94, 1.32)	1.13 (0.98, 1.31)	0.66 (0.59, 0.73)	0.72 (0.64, 0.80)
West	1.06 (0.88, 1.27)	1.23 (1.03, 1.47)	0.71 (0.64, 0.79)	0.77 (0.69, 0.87)
Need-based factors				
Children living in household	0.80 (0.71, 0.90)***	0.81 (0.71, 0.92)**	1.36 (1.28, 1.45)***	1.51 (1.39, 1.65)***
Self-reported health status				
Excellent	1.00	1.00	1.00	1.00
Very good	1.60 (1.35, 1.90)***	1.8 (1.55, 2.09)***	1.17 (1.08, 1.26)***	1.14 (1.04, 1.25)***
Good	2.64 (2.22, 3.13)	3.23 (2.79, 3.74)	1.28 (1.17, 1.39)	1.18 (1.07, 1.31)
Fair/poor	6.42 (5.23, 7.88)	9.44 (8.11, 10.99)	1.95 (1.70, 2.24)	1.68 (1.44, 1.96)

Note. OR = odds ratio; CI = confidence interval.

* $P < .05$; ** $P < .01$; *** $P < .001$.

that these women are less willing to disclose their sexual orientation and are more concerned about being able to find a GLB-friendly provider.¹⁵

In other studies, SSR women's health care use may have been influenced by discrimination experienced from their providers.^{34,35} Findings on gay men's satisfaction with health care services have been more variable in nature. Although some studies have shown that gay men are disaffected by experiences of stigma in the health care system, other studies have shown that they report their health care experiences as generally positive.^{16,36}

It is notable that rates of health insurance coverage were lower among SSR women than OSR women; this finding might be at least partially attributed to the inability of same-sex couples to marry or form legal partnerships in most states. Marriage is a strong predictor of health insurance coverage in the United States; nationwide, people who have never been married (26.9%) and those who are living with a partner (31.7%) are more likely to be uninsured than those who are married (12.6%).³⁷ In all likelihood, SSR women are more strongly affected than SSR men by an inability to obtain health insurance coverage through their partner. More than 40% of insured women in the United States are covered through another person, as compared with only one fifth of insured men.³⁸ In addition, women are less likely than men to be employed in professions that provide health insurance coverage.¹³ The present findings in respect to health insurance highlight the need to encourage government and industry to offer health coverage for individuals involved in domestic partnerships.

Having health insurance coverage is a vital factor in health care access. Although a growing number of companies offer health coverage to same-sex domestic partners, few employees use this benefit.^{39,40} Lack of enrollment and underenrollment have been attributed both to employees not wishing to "come out" at work and to differences in taxation of benefits to nonmarried partners. Little is known about the experiences of GLB individuals as insurance policyholders, nor is it clear how type of health insurance or provider choice may influence use of health care in the GLB population.

TABLE 4—Health Care Access Among Respondents in Same-Sex and Opposite-Sex Relationships: National Health Interview Survey, 1997–2003

	Men, % (SE)		Women, % (SE)	
	Same Sex (n = 316)	Opposite Sex (n = 42 856)	Same Sex (n = 298)	Opposite Sex (n = 50 562)
Health insurance status				
Private coverage	76.9 (2.7)	81.9 (0.3)	78.7 (2.3)	81.4 (0.3)
Public coverage	6.5 (1.4)	4.1 (0.1)	4.5 (1.3)	5.0 (0.1)
Uninsured	16.7 (2.3)	14.0 (0.2)	16.8 (2.5)	13.7 (0.2)
Insurance status of spouse/partner				
Insured	79.9 (2.1)***	86.7 (0.2)	82.1 (2.1)**	87.5 (0.2)
Uninsured	20.1 (2.1)	13.3 (0.2)	17.9 (2.1)	12.5 (0.2)
Policyholder ^a				
Respondent	87.6 (2.2)***	76.4 (0.3)	82.7 (2.7)***	40.1 (0.3)
Another individual	12.4 (2.2)	23.6 (0.3)	17.3 (2.7)	59.9 (0.3)
Physician choice				
Plan allows any doctor to be selected ^a	33.7 (3.8)	37.1 (0.4)	31.7 (3.6)	37.7 (0.4)
Provider must be selected from group/list ^a	66.3 (3.8)	62.9 (0.4)	68.3 (3.6)	62.3 (0.4)
Health care use				
Regular source of health care	82.8 (2.2)	82.8 (0.3)	83.3 (2.4)***	90.9 (0.2)
Health care visit within previous 12 mo	81.2 (2.3)***	73.9 (0.3)	86.0 (2.2)	89.4 (0.2)
Unmet medical needs as a result of cost in previous 12 mo	7.3 (1.5)*	4.5 (0.1)	10.1 (1.8)***	5.5 (0.1)

Note. Percentages are weighted. Statistical tests compared within-gender differences and reflect weighted χ^2 differences across groups. Post hoc tests were not conducted.

^aAmong only respondents with private insurance.

* $P < .05$; ** $P < .01$; *** $P < .001$.

We found that similar proportions of SSR and OSR participants reported being able to choose any health care provider under their health plan. A previous study showed that individuals whose insurance plans allowed them to choose a GLB provider were more likely to be older and male; they were also more likely to adhere to their medication regimen and to feel comfortable discussing sex-related issues with a physician.¹⁵ Widening the choices of providers in insurance plans may therefore help increase access among SSR individuals as well as change the nature of their interchanges with providers.

Our data reveal the validity of Andersen's model in predicting patterns of health care use among GLB individuals. An extensive literature has established that health care access and use among adults are influenced by employment status, education level, race/ethnicity, age, socioeconomic status, and location of residence. Health insurance coverage also emerged as a key covariate in our models, illustrating its importance in helping

Americans gain access to affordable, regular health services. Similar to the findings of previous studies, younger participants were less likely to have a regular source of health care and were much less likely to be insured than were older participants. Hispanic respondents had less access than respondents in other racial/ethnic groups across all major outcomes, including less than one half the odds of health insurance coverage.

The findings of this study suggest that health educators designing programs to improve access to health services should be aware of the barriers that lesbian patients may face. We encourage the development of outreach programs aimed toward the lesbian community to improve this population's regular use of health services. Furthermore, our results show the need for improved cultural competence among providers. Although much has changed in recent years, homophobic attitudes persist.⁴¹ In some cases, even providers with positive attitudes toward GLB patients report poor knowledge of the needs

of these patients; in other cases, providers may be unsure of how to discuss GLB needs with patients without offending them.^{42,43} At present, many residency programs do not include information on GLB health.^{44,45} Thus, it is urgent that more information on GLB health needs be provided in residency programs and in continuing education programs designed for primary care providers.

Limitations

This study was limited to individuals living with a partner, and our findings cannot be generalized to those not living with a partner. Individuals living with partners are likely to have greater financial resources that allow them to cover the costs of medical services, putting them at an advantage over single individuals without partners. In addition, the social support gained from close, intimate partnerships has been shown to improve health,⁴⁶ possibly by increasing healthy behaviors and use of health care services. In this survey, 12% of male and 17% of female SSR respondents with health insurance coverage were covered through their domestic partner or another individual.

The population-based data collection design of the NHIS is a strength of this study. Many studies focusing on GLB populations recruit participants from social venues or GLB health centers, where identification with the GLB community is more likely⁴⁷; the population-based nature of the NHIS suggests that its findings better represent the partnered GLB population than do the results of other studies. However, the SSR/OSR variable must be viewed as a proxy for sexual orientation, given that participants were not asked directly about their sexual orientation.

Data are not available on whether the sample of SSR adults selected in the NHIS was representative of SSR adults nationally. However, the NHIS was designed and weighted to be representative of US noninstitutionalized adults as a whole.²⁸ Of the 94 032 individuals included in this study, 0.65% reported that they were involved in an SSR, and 99.35% reported they were involved in an OSR. This percentage of same-sex couples was similar to the percentage (0.6%) of such couples reported in the 2000 census,⁴⁸ and we do not believe that bias due to nonresponse was a significant issue. However, it is

likely that not all individuals living with a same-sex partner disclosed their relationship status to interviewers. Census-based estimates indicate that same-sex partnerships are probably undercounted by 13% to 28%,⁴⁹ although extrapolations from population estimates would suggest undercounts as high as 62%.⁵⁰ Studies of census data have shown that individuals who do not use “unmarried partner” to designate their SSR are more likely than those who do to have low incomes and to live in the Midwest.⁴⁹

This study was cross-sectional in design, and thus it is subject to the limitations associated with such research.⁵¹ It is difficult to know the full contribution of SSR status to health care access, in that SSR individuals may modify their health care choices to gain access to the care available to them. For example, it is possible that GLB spouses compensate for a lack of partner coverage by altering their employment decisions, deciding that both partners will work, or working for employers that offer coverage for same-sex partners.

Conclusions

Our results confirm those of previous studies indicating that lesbians are at particularly high risk of poor health access. Given that this is one of the largest-scale studies of health care access among individuals in SSRs, our results have several implications for the need to improve access in this group. There is a clear need for targeted outreach to the same-sex community and wider scale training of primary care providers in lesbian health issues. Making health insurance more widely available could increase access to health services, particularly among SSR women. As mentioned, those designing programs to improve access to services should be aware of the barriers faced by lesbian patients.

Future interventions also should emphasize that individuals involved in same-sex partnerships may be less likely to have recently used health care services, and thus they might be at increased likelihood of missing routine health screenings for (and counseling designed to reduce) disease risk factors. Additional population-based surveys involving measures of sexual orientation are suggested. ■

About the Authors

At the time of the study, Julia E. Heck was a doctoral student in the Department of Epidemiology and a fellow with the Institute for Social and Economic Research and Policy, Columbia University, New York City. Randall L. Sell is with the Department of Sociomedical Sciences, Columbia University. Sherri Sheinfeld Gorin is with the Departments of Epidemiology and Sociomedical Sciences, Columbia University, and the Department of Health and Behavior Studies, Teacher's College, Columbia University.

Requests for reprints should be sent to Sherri Sheinfeld Gorin, PhD, Department of Health and Behavior Studies, 525 W 120th St, Box 239, Thorndike 954, New York, NY 10027 (e-mail: ssg19@columbia.edu).

This article was accepted July 29, 2005.

Contributors

J.E. Heck originated the study, conducted the analyses, and led the writing. R.L. Sell provided conceptual guidance and helped interpret the findings. S. Sheinfeld Gorin supervised the work. All of the authors reviewed and edited drafts of the article.

Acknowledgments

We thank Alan Berkman for his editorial suggestions. Susan Jack of the National Center for Health Statistics provided valuable help answering questions on the National Health Interview Survey.

Human Participant Protection

No protocol approval was needed for this study.

References

1. *Healthy People 2010: Understanding and Improving Health*. 2nd ed. Washington, DC: US Dept of Health and Human Services; 2000.
2. Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services. *Access to Health Care in America*. Washington, DC: National Academy Press; 1993.
3. Institute of Medicine, Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: National Academy Press; 2003.
4. *Health, United States: Socioeconomic Status and Health Chartbook*. Hyattsville, Md: National Center for Health Statistics; 1998.
5. Cochran SD, Mays VM, Bowen D, et al. Cancer-related risk indicators and preventive screening behaviors among lesbians and bisexual women. *Am J Public Health*. 2001;91:591–597.
6. Matthews AK, Brandenburg DL, Johnson TP, Hughes TL. Correlates of underutilization of gynecological cancer screening among lesbian and heterosexual women. *Prev Med*. 2004;38:105–113.
7. Aaron DJ, Markovic N, Danielson ME, Honnold JA, Janosky JE, Schmidt NJ. Behavioral risk factors for disease and preventive health practices among lesbians. *Am J Public Health*. 2001;91:972–975.
8. Rankow EJ, Tessaro I. Cervical cancer risk and Papanicolaou screening in a sample of lesbian and bisexual women. *J Fam Pract*. 1998;47:139–143.
9. Valanis BG, Bowen DJ, Bassford T, Whitlock E, Charney P, Carter RA. Sexual orientation and health: comparisons in the Women's Health Initiative sample. *Arch Fam Med*. 2000;9:843–853.
10. Marrazzo JM, Koutsky LA, Kiviat NB, Kuypers JM, Stine K. Papanicolaou test screening and prevalence of genital human papillomavirus among women who have sex with women. *Am J Public Health*. 2001;91:947–952.
11. Kass NE, Faden RR, Fox R, Dudley J. Homosexual and bisexual men's perceptions of discrimination in health services. *Am J Public Health*. 1992;82:1277–1279.
12. Wadsworth E, McCann K. Attitudes towards and use of general practitioner services among homosexual men with HIV infection or AIDS. *Br J Gen Pract*. 1992;42:107–110.
13. Institute of Medicine, Committee on the Consequences of Uninsurance. *Coverage Matters: Insurance and Health Care*. Washington, DC: National Academy Press; 2001.
14. Halkitis PN, Parsons JT, Wolitski RJ, Remien RH. Characteristics of HIV antiretroviral treatments, access and adherence in an ethnically diverse sample of men who have sex with men. *AIDS Care*. 2003;15:89–102.
15. Klitzman RL, Greenberg JD. Patterns of communication between gay and lesbian patients and their health care providers. *J Homosex*. 2002;42:65–75.
16. Katz MH, Marx R, Douglas JM Jr, et al. Insurance type and satisfaction with medical care among HIV-infected men. *J Acquir Immune Defic Syndr*. 1997;14:35–43.
17. Diaz T, Chu SY, Conti L, et al. Health insurance coverage among persons with AIDS: results from a multistate surveillance project. *Am J Public Health*. 1994;84:1015–1018.
18. Diaz T, Chu SY, Buehler JW, et al. Socioeconomic differences among people with AIDS: results from a multistate surveillance project. *Am J Prev Med*. 1994;10:217–222.
19. Messeri PA, Abramson DM, Aidala AA, Lee F, Lee G. The impact of ancillary HIV services on engagement in medical care in New York City. *AIDS Care*. 2002;14(suppl 1):S15–S29.
20. Goldman DP, Leibowitz AA, Joyce GF, et al. Insurance status of HIV-infected adults in the post-HAART era: evidence from the United States. *Appl Health Econ Health Policy*. 2003;2:85–90.
21. Diamant AL, Schuster MA, Lever J. Receipt of preventive health care services by lesbians. *Am J Prev Med*. 2000;19:141–148.
22. Case P, Austin SB, Hunter DJ, et al. Sexual orientation, health risk factors, and physical functioning in the Nurses' Health Study II. *J Womens Health*. 2004;13:1033–1047.
23. Bowen DJ, Bradford JB, Powers D, et al. Comparing women of differing sexual orientations using population-based sampling. *Women Health*. 2004;40:19–34.
24. Gruskin EP, Hart S, Gordon N, Ackerson L. Patterns of cigarette smoking and alcohol use among lesbians and bisexual women enrolled in a large health maintenance organization. *Am J Public Health*. 2001;91:976–979.
25. Ryan H, Wortley PM, Easton A, Pederson L, Greenwood G. Smoking among lesbians, gays, and

bisexuals: a review of the literature. *Am J Prev Med*. 2001;21:142–149.

26. Dibble SL, Roberts SA, Nussey B. Comparing breast cancer risk between lesbians and their heterosexual sisters. *Womens Health Issues*. 2004;14:60–68.

27. Institute of Medicine, Committee on Lesbian Health Research Priorities. *Lesbian Health: Current Assessment and Directions for the Future*. Washington, DC: National Academy Press; 1999.

28. Botman SL, Moore TF, Moriarty CL, Parsons VL. Design and estimation for the National Health Interview Survey, 1995–2004. *Vital Health Stat* 2. 2000;No. 130.

29. Andersen RM. Revisiting the behavioral model and access to medical care: does it matter? *J Health Soc Behav*. 1995;36:1–10.

30. Cohen RA, Ni H. *Health Insurance Coverage for the Civilian Noninstitutionalized Population: Early Release Estimates From the National Health Interview Survey, January–June 2003*. Hyattsville, Md: National Center for Health Statistics; 2004.

31. *SUDAAN Version 9.0.1*. Research Triangle Park, NC: Research Triangle Institute; 2003.

32. *Mental Disorders: Diagnostic and Statistical Manual*. Washington, DC: American Psychiatric Association; 1952.

33. Hing E, Middleton K. *National Hospital Ambulatory Medical Care Survey: 2002 Outpatient Data Summary*. Hyattsville, Md: National Center for Health Statistics; 2004.

34. Brotman S, Ryan B, Jalbert Y, Rowe B. The impact of coming out on health and health care access: the experiences of gay, lesbian, bisexual and two-spirit people. *J Health Soc Policy*. 2002;15:1–29.

35. van Dam MAA, Koh AS, Dibble SL. Lesbian disclosure to health care providers and delay of care. *J Gay Lesbian Med Assoc*. 2001;5:11–19.

36. Stein GL, Bonuck KA. Physician-patient relationships among the lesbian and gay community. *J Gay Lesbian Med Assoc*. 2001;5:87–93.

37. Cohen RA, Coriaty-Nelson Z. *Health Insurance Coverage: Estimates From the National Health Interview Survey, 2003*. Hyattsville, Md: National Center for Health Statistics; 2004.

38. Boushey H, Wright J. *Workers Receiving Employer Provided Health Insurance*. Washington, DC: Center for Economic and Policy Research; 2004.

39. Bowman CG. Legal treatment of cohabitation in the United States. *Law Policy*. 2004;26:119–151.

40. Duncan BW, Lock J. Offering domestic partnership health benefits: an economic concern? *J Gay Lesbian Med Assoc*. 2001;5:95–100.

41. Tellez C, Ramos M, Umland B, Palley T, Skipper B. Attitudes of physicians in New Mexico toward gay men and lesbians. *J Gay Lesbian Med Assoc*. 1999;3:83–89.

42. Lena SM, Wiebe T, Ingram S, Jabbour M. Pediatric residents' knowledge, perceptions, and attitudes towards homosexually oriented youth. *Ann R Coll Physicians Surg Can*. 2002;35:401–405.

43. Lena SM, Wiebe T, Ingram S, Jabbour M. Pediatricians' knowledge, perceptions, and attitudes towards providing health care for lesbian, gay, and bisexual adolescents. *Ann R Coll Physicians Surg Can*. 2002;35:406–410.

44. Amato P, Morton D. Lesbian health education: a survey of obstetrics and gynecology residency training programs. *J Gay Lesbian Med Assoc*. 2002;6:47–51.

45. Kelly TF, Langsang D. Pediatric residency training and the needs of gay, lesbian, and bisexual youth. *J Gay Lesbian Med Assoc*. 1999;3:5–9.

46. House JS, Landis KR, Umberson D. Social relationships and health. *Science*. 1988;241:540–545.

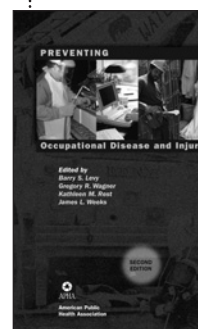
47. Sell RL, Petruccio C. Sampling homosexuals, bisexuals, gays, and lesbians for public health research: a review of the literature from 1990 to 1992. *J Homosex*. 1996;30:31–47.

48. Simmons T, O'Connell M. *Married-Couple and Unmarried-Partner Households: 2000*. Washington, DC: US Census Bureau; 2003.

49. Badgett MVL, Rogers MA. *Left Out of the Count: Missing Same Sex Couples in Census 2000*. Amherst, Mass: Institute for Gay and Lesbian Strategic Studies; 2003.

50. Smith DM, Gates GJ. *Gay and Lesbian Families in the United States: Same-Sex Unmarried Partner Households*. Washington, DC: Urban Institute; 2001.

51. Rothman KJ, Greenland S. *Modern Epidemiology*. 2nd ed. Philadelphia, Pa: Lippincott-Raven; 1998.



Preventing Occupational Disease and Injury

2nd Edition

Barry S. Levy, Gregory R. Wagner, Kathleen M. Rest, James L. Weeks, Editors

Each year in the United States, 5,000 to 6,000 workers die from acute traumatic occupational injuries. Similarly, the causes of, and methods to prevent many occupational diseases are well known. Work can be hazardous!

However, more importantly, most hazards can be anticipated, and prevented. This book, updated from its first edition published in 1991, provides information to assist in anticipating the potential for disease or injury, recognizing occupational diseases and injuries, evaluating relevant data, and designing and implementing control measures.

ISBN 0-87553-043-5

Softcover • 2004 \$21.95 APHA Members • \$31.00 Nonmembers

American Public Health Association

Publication Sales

Web: www.apha.org

E-mail: APHA@pbd.com

Tel: 888-320-APHA

FAX: 888-361-APHA

